REMARKS

Reconsideration of the application as amended herein is respectfully requested. Claims 1-5 are pending.

Drawings

The Office Action has objected to the drawings. The reason stated for this objection is that "they fail to show where test data is coming from as described in the specification." Applicant has amended the application to include new Figure 5. New Figure 5 is identical to Fig. 8 of U.S. Patent No. 5,551,013 ("the '013 patent"). The '013 patent was incorporated by reference into the specification upon filing at page 4, lines 6-13. Thus, no new matter has been added. Applicant notes that the specification of the present application has been amended to discuss newly presented Figure 5. This text (other than the reference to Figure 5) was taken verbatim from the '013 patent. New Figure 5 is attached hereto as Exhibit A.

Information Disclosure Statement

The Office Action states that the listing of the references in the specification is not a proper information disclosure statement. Applicant notes that all the patents and patent applications referenced in the specification were presented in an Information Disclosure Statement dated October 28, 2004. Applicant has checked PAIR, which indicates that this Information Disclosure Statement was received on November 1, 2004. For the convenience of the Examiner, Applicant is attaching a copy of this Information Disclosure Statement as Exhibit B to this paper.

Claim Rejections - 35 U.S.C. § 112, First Paragraph

The Office Action has rejected claims 1-5 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicant respectfully traverses this rejection. The stated reason for this rejection is that the "specification is unclear whether this process of changing the inputs is manual or electronic nor defines the source of the "1s" and "0s". Applicant respectfully submits that a person having ordinary skill in the art would understand that the conductors are physically moved. The reason for this is that the specification states:

> With the exception of the conductor pairs whose connector pins are interchanged from the pin assignments at one connector relative to the other, the remaining conductors in the cable are "straight through" connections. That is, the individual conductors 15 in the cable connect a pin at one end of the cable to the corresponding pin at the other end of the cable (e.g. left-hand pin 1 connected to right-hand pin 1, pin 9 connected to pin 9, and so on.).

> In order to identify the length of a cable after it has been installed, the end-to-end connections of at least one pair 20 of conductors is swapped....

> ***

> In this illustrative embodiment, the conductor connected to the left-hand sending pin 04 is connected to the right-hand receiving pin 05 and the left hand sending pin 05 is connected to the right-hand receiving pin 04. The emulator is programmed to couple a binary signal to each input pin in a patter that will allow detection of a swapped pair and the position of the swapped pair in the sequence (e.g. alternating "1s" and "0s").

Specification, page 8, line 26 through page 9, line 19. As is seen in this quote, the specification refers to "pins" and the fact that conductors 15 connect a "pin" at one end of the cable to another "pin" at the other end of the cable. The specification goes on to discuss swapping "end-to-end"

connections of pairs of *conductors*. In the example given, the conductor connected to sending

pin 04 is swapped such that it is connected to receiving pin 05 while sending pin 05 is swapped

so that it is connected to the receiving pin 04. "Pins" and "conductors" are physical items.

Given that the specification consistently refers to "conductors" that are connected to "pins", one

having ordinary skill in the art would recognize these are physical connections. Thus, one

having ordinary skill in the art would also recognize that "swapping" of conductors into different

pins is a physical process in that a conductor is moved from one pin to the next. Moreover, that

the conductor swapping is a manual process is seen by the fact that the specification states that

the emulator must be programmed to allow for "detection" of the swapped pairs of conductors.

See page 9, lines 16-19. If the conductor swapping were an electronic (i.e., automatic) process,

there would be no need for the emulator to detect when a conductor had been swapped.

As for the Office Action's statement that the source of the "1s" and "0s" has not been

disclosed, Applicant respectfully points out that the specification explicitly states that the

emulator supplies the "1s" and "0s"." See page 9, lines 16-19.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

The Office Action has rejected claims 1-5 under 35 U.S.C. § 112, Second Paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which

Applicant regards as his invention. Applicant respectfully traverses this rejection. The Office

Action states that the claims should functionally define the steps a computer will take rather than

simply reciting source code or object code instructions. None of the claims in this application

recite either source code or object code. Instead, the claims recite a series of steps that Applicant

regards is his invention. After a discussion with the Examiner, Applicant has made a minor

clarifying amendment to independent claims 1 and 5 so that one understands that it is the test

pattern that comprises binary data. Applicant respectfully submits that this binary data is not

object code.

Design Choice

The Office Action has rejected a segment of claims 1-5 based upon "design choice"

because the process of cable adjustability is integral to the entire process. Applicant respectfully

traverses this rejection. Firstly, Applicant respectfully submits that "design choice" is not a

statutory grounds for rejection. More important, however, is the fact that the concept of cable

adjustability is not what Applicant has claimed as the invention. Instead, Applicant has claimed

a process for identifying lengths of cables used to interconnect emulation boards so that the

differing delays caused by different cable lengths can be accounted for. See e.g., specification at

page 5, line 18, through page 6, line 8. Thus, the subject matter claimed is not merely a " design

choice", but is used to solve an issue that could lead to inaccurate emulation results.

Claim Rejections - 35 U.S.C. § 103(a)

The Office Action has rejected claims 1-5 under 35 U.S.C. § 103(a) as being

unpatentable over Larson in view of Fakhraie-Fard. Applicant respectfully traverses this

rejection. The Office Action states that Fakhraie-Fard teaches a method for determining the

length of a cable while the cable is installed in a manner where prior to installing the cable, either

the inputs or outputs of at least one pair of conductors are interchanged to denote cable length.

This is not correct. The section cited in the Office Action as support for this teaching is printed

below:

These and other objects are addressed by the present invention,
which comprises a portable, hand-held test device which is adapted
to be alternatively connected to either a TE device or an NT
device, and which is capable of alternatively emulating either a TE
device or an NT device during the aforementioned activation
sequence, whereby (1) when the test device is connected to a TE
device and is instructed to emulate an NT device, the test device
can determine if the TE device is operating in accordance with
ISDN standards, and (2) when the test device is connected to an
NT device and is instructed to emulate a TE device, the test device
can determine if the NT device is operating in accordance with
ISDN standards. The test device is also adapted to test various
lengths of RJ45 cabling within the network to determine whether
the RJ45 cabling is functioning properly and, if it is not, to
determine certain things about the nature of the malfunction.

All this section teaches is that the test device can be connected to either a TE device ("terminal

equipment device") or a NT device ("network termination device"). Neither this section nor any

other section of Fakhraie-Fard teaches or suggests anything about interchanging the conductors

of a multi-conductor cable.

Moreover, contrary to the argument in the Office Action, this section says nothing about

using the device disclosed in Fakhraie-Fard to determine cable length or that the interchanged

conductors of the cable actually are used to determine length. In fact, all this section of

Fakhraie-Fard teaches is that the test device can test "various lengths" of cabling within a

network to determine whether that cabling is functioning properly and if not, determine certain

(unspecified) "things" about the nature of the malfunction. The ability to test various lengths of

cable to determine whether a cable is functioning properly is not the same thing as determining

the length of a multi-conductor cable.

In addition, the Office Action incorrectly argues that Fakhraie-Fard teaches inputting a

test pattern to the cable where the test data is comprised of binary data. The Office Action relies

on Col. 80, lines 53-62, to support this argument. However, this section of Fakhraie-Fard refers

to pulses that are sent by a "pulse activation means" that causes the device to terminate a line activation. Pulses are not binary "data". Moreover, these pulses, even if they could somehow be construed to be binary data, are used to terminate a line activation and not for determining cable length, which all of the claims require.

Finally, contrary to what is stated in the Office Action, Larson does not teach anything about compiling the emulation program to account for the interchanged pair of conductors. Firstly, Larson has nothing to do with "emulation programs", which, as the claims indicate, are programs that correspond to a logical design for an integrated circuit. Thus, Larson cannot possibly teach anything about compiling such an emulation program to account for the interchanged conductors. Additionally, the section cited in the Office Action (Larson, Col. 26, lines 8-26) does not even discuss going through any type of recompiling step to account for interchanged conductors. This is not surprising since Larson does not teach anything about interchanging conductors, meaning that there could be no interchanged conductors to account for.[1]

The Office Action additionally argues in the context of claim 5 that Larson teaches a method for determining cable length.[2] This is incorrect. The section the Office Action supplies as support for this proposition is reprinted below:

> Both rectangular and ribbon wiring geometries may be used in a
> single network depending on distance between switches to be
> connected and other considerations. Finally, the networks need not
> necessarily be square in shape. The switches may be configured

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[1] The Office Action recognizes that Larson does not teach anything about interchanging conductors, as it argues that Fakhraie-Fard supplies such a teaching. However, as discussed above, Fakhraie-Fard does not teach or suggest anything about interchanging connectors for determining cable length.

[2] The arguments presented above are applicable to all of the claims.

into other shapes, including parallelograms, without losing the advantageous properties of the present and related inventions.

Larson, Col. 11, lines 37-44. This portion from Larson says nothing about determining cable length. Instead, all this section teaches is that rectangular and ribbon wiring geometries may be used depending upon the distance between the switches. As is clearly seen in this section, Larson is silent as to how one might actually determine what the distance between the switches is.

As is seen from the above, both Larson and Fakhraie-Fard are missing limitations present in all the claims of this application. Thus, even if Larson and Fakhraie-Fard are properly combinable (which Applicant does not believe to be the case), the combination fails to teach several limitations of the claims. Because limitations are missing, the combination of Larson and Fakhraie-Fard cannot render claims 1-5 obvious.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that the present application is in condition for allowance, which is respectfully requested. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (650) 614-7400. If additional fees are needed, the Office is authorized to charge Deposit Account No. 15-0665.

Respectfully submitted,

ORRICK, HERRINGTON & SUTCLIFFE LLP

Dated: October 28, 2004   By:
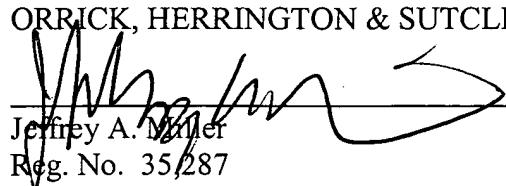
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Amendments To The Drawings

Attached hereto as Exhibit A is new Figure 5.